

BIBLIOGRAPHICAL NOTICES.

The Honey-Bee: its Natural History, Physiology, and Management.

By EDWARD BEVAN, M.D. Revised, enlarged, and illustrated by WILLIAM AUGUSTUS MUNN, F.R.H.S. &c. Svo. London: Van Voorst, 1870.

AMONG the almost infinite series of Bee-books of which our literature can boast, Dr. Bevan's volume has always deservedly taken a high place. But of late years the discoveries made in the natural history of the bee, and the changes thereby induced in the system of management adopted by enlightened apiarians, have thrown this excellent manual rather out of date; and Mr. Munn has therefore performed a task for which he deserves the thanks of all bee-keepers by taking up the subject from Bevan's stand-point, cancelling the antiquated parts of the book, and working into it, for the most part, so far as we can see, very conscientiously, the results of recent investigations into this most interesting department of practical entomology.

The first part of Mr. Munn's volume, occupying nearly one-half of it, is exclusively devoted to the description of the management of the beehive, and gives all necessary practical directions for the establishment of an apiary. The author, like all enthusiasts upon a single subject, has, of course, a pet plan of his own. This consists of a peculiar form of hive, which he calls "the bar-and-frame hive," and to which he ascribes great advantages, both with regard to the management of the bees, and to the carrying on of observations for the purpose of completing those parts of our knowledge of the habits and physiology of these interesting insects which still present some degree of obscurity. The merits of this peculiar apparatus, the structure of which is fully described and illustrated with figures, we will not venture to discuss; to the uninitiated mind it seems to be an admirable contrivance.

In his second part Mr. Munn enters upon those questions which are of interest to entomologists—the anatomy and physiology of the insect, its senses and instincts, its mode of architecture, &c.; but here also we find several chapters devoted to matters connected with pure apiarianism. The treatment of the natural history of the insect is somewhat defective, owing to an evidently imperfect knowledge of entomology on the part of the author, and in many cases to his scattering information upon particular points in the natural history of the bee through several chapters of the book, which are properly connected with matters treated of elsewhere. Some of his opinions will, no doubt, be warmly disputed both by his brother apiarians and by entomologists; whilst in other cases, as in his rejection of Siebold's theory of the parthenogenetic origin of the drones, he will certainly meet with little favour from most entomologists, whilst many bee-keepers will be inclined to support him; but the reader will find in these chapters a valuable series of observed facts, the importance of which is quite independent of the conclusions drawn from them, whether rightly or wrongly, by the author. With regard

to the author's objections to Von Siebold's views, we may say that he does not seem to have comprehended their full significance, and that we cannot think that the arguments used by him at all invalidate the hypothesis of the parthenogenetic origin of drone-eggs.

Mr. Munn's book, which we recommend to the notice of all bee-masters and general entomologists, is illustrated with a considerable number of plates, some of which show the form and structure of different kinds of hives and other apiarian apparatus, whilst the rest exhibit figures of bees and their cells and combs in various conditions. The latter are coloured, and are drawn by the author himself; their execution is rough, but they are generally very characteristic.

British Insects: a Familiar Description of the Form, Structure, Habits, and Transformations of Insects. By E. F. STAVELEY. 8vo. London: Reeve, 1871.

Miss Staveley has followed up her excellent little book on the British Spiders with an equally good work on the insects of our islands, although, as might be expected from the difference in the extent of the two subjects, the treatment here necessarily adopted causes a fundamental difference between the two books. Miss Staveley's 'British Spiders' was in fact an abridgment of Mr. Blackwall's great work on the same class of animals, containing characters of all the species and figures illustrating all the genera; so that it would enable the serious study of the Araneida to be carried on to a considerable extent, and might be used as a pocket summary of Blackwall's monograph; whilst in the 'British Insects' the author has aimed only at guiding the beginner's first steps in the study of entomology. The number of species referred to is necessarily small in comparison with the enormous insect-population of Britain; and the figures given only illustrate the great groups or families.

But Miss Staveley has carried out the one plan as well as she did the other, and has produced an admirable manual for the tyro in entomology. Her classification, indeed, is somewhat antiquated, being founded chiefly upon the 'Introduction to the Modern Classification of Insects' of Prof. Westwood; so that we here once more meet with the orders Euplexoptera, Thysanoptera, Trichoptera, Aphaniptera, Homoptera, and Heteroptera, which most entomologists have long since given up. The Strepsiptera are mentioned as puzzling insects, but placed with the Coleoptera. Perhaps the undue multiplication of orders has advantages for the beginner in some cases, by enabling the definitions of these groups to be drawn up with less liability to exceptions; and probably this feeling may have weighed with the author in adopting Westwood's classification; but we think that, in the case of the Homoptera and Heteroptera, at any rate, greater perspicuity would have been attained by uniting them in a single order characterized by the structure of the mouth.

The information given as to the structure and natural history of